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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,660	08/19/2003	James William Otter	60246-229	5263

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EXAMINER

DUONG, THO V

ART UNIT PAPER NUMBER

3743

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,660

Applicant(s)

OTTER, JAMES WILLIAM

Examiner

Tho v Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13, 15 and 17-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 15 and 17-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Receipt of applicant's amendment filed 8/16/2004 is acknowledged. Claims 13, 15, and 17-25 are pending.

Response to Arguments

Applicant's arguments filed 8/16/2004 have been fully considered but they are not persuasive. Applicant's argument that reference to Boah does not disclose the coating is selected from the group consisting of polyester, polyolefin, polyetherimide, polyethersulfone, polysulfone and polyimide, has been very carefully considered but is not deemed to be persuasive.

Boah clearly discloses (figure 5 and column 2, line 40-43) that the coating layer (53) is polyolefin, which is one of the materials in the group. Boah further discloses that coating layer is polypropylene plastic, which is known in the art to be specific type of polyolefin (See paragraph 19 of the instant application or Smith 4,515,210, at column 1, lines 44-47). With regarding claims 17 and 18, applicant's argument has been very carefully considered but is not deemed to be persuasive. Applicant is reminded that claims 17 and 18 were not rejected under 35 U.S.C 102 as being anticipated by Boah alone but rather, claims 17 and 18 was rejected under 35 U.S.C 103 (a) as being unpatentable over Boah in view of Ehrig. Though, Boah does not teach or suggest the use of tackifier or maleate for coating of polypropylene on a metal surface, Boah clearly discloses (figure 5) the need for coating a polypropylene layer on a metal surface. In the art of coating polypropylene on a metal surface, Ehrig clearly discloses (column 1, lines 9-28) that a tackifier such as maleic anhydride is added to polypropylene to yield maleated polypropylene for the purpose of improving the adhering of polypropylene to metal. Since the

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motivation and advantage for employing a tackifier or maleic in polypropylene are clearly found in the prior art, claims 17 and 18 remain rejected.

Applicant has amended claim 18 to overcome the previous 112th first paragraph rejection. Therefore, the rejection under 112th first paragraph against claim 18, is now withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13,15 and 19-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Boah et al. (US 4,953,511). Boah discloses (figures 1,5-6 and column 2, lines 37-43) a heat exchanger component comprising a plurality of metal condensing flow passages (62) having a substantially flat metal surface (61) and a film (53) of polyolefin, specifically polypropylene adhering directly to the surface for preventing corrosion on the surface. With regarding claims 22 and 23, Boah discloses (column 4, lines 34-43) that the thickness of the coating layer (53) is less than 6.0 mils, which is within the claimed range. As regarding claims 13, 15,19 and 20, the method of forming the device is not germane to the issue of patentability of the device itself. “Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In

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this instant application, the heat exchanger component in the product by process claim is the same as or obvious from the heat exchanger component (62) of Boah, in which a film of polymer is directly adhering to the metal surface. The steps of using roller, heating and melting pellets to form film may be different from Boah's process, but the final product of the prior art is the same with the product in the product-by-process claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boah et al. in view of Ehrig et al. (US 4,824,736). Boah substantially discloses all of applicant's claimed invention as discussed above except for the limitations a tackifier or a maleate mixing with polyolefin. Ehrig et al. discloses (column 1, lines 25-40) that a tackifier such as maleic anhydride is mixed with a polypropylene (polypropylene is known in the art to be a specific type of polyolefin) to form a maleated polypropylene for the purpose of improving the adhesion of the polypropylene to metal. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Ehrig's teaching in Boah's heat exchanger to improve the adhesion of the polypropylene to the metal surface. Applicant is advised to see Smith (US

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4,515,210) in column 1, lines 44-47 or paragraph 19 in the instant application for polypropylene being a specific type of polyolefin.

Claims 24 and 25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Boah. Boah substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the film is made of polyolefin, which includes polyethylene, or polyester, which includes one of polybutylene terephthalate or polyethylene terephthalate. However, it is well known in the art that there are more than one materials that is capable of being use to prevent a metal surface from corrosion. Moreover, it appears that the anti-corrosion effect of the heat exchanger surface is equally achieved with the use of other anti corrosion material such as polyolefin as taught by Boah. Given the fact that the materials are claimed as members of a Markush group (claim 1) and applicant has not disclosed any criticality or any particular purpose for having the claimed materials, the use of polyolefin, which includes polyethylene, or polyester, which includes one of polybutylene terephthalate or polyethylene terephthalate, is deemed to be a design consideration, which fails to patentably distinguish over the prior art of Boah. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the material as of polyolefin, which includes polyethylene or polyester, which includes one of polybutylene terephthalate or polyethylene terephthalate, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Conclusion

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Norback (US 4,708,832) discloses a contact body having a thermoplastic film coated on the heat exchanger.

Smith (4,515,210) discloses polyolefin is a generic name of polyethylene and polypropylene.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703) 305-0768. The examiner can normally be reached on from 9:30-6 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



TD

September 10, 2004



Tho Duong

Patent Examiner.